



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/733,856

12/11/2003

Frederic Hayem

16106US02

8105

23446 7590 10/18/2007  
MCANDREWS HELD & MALLOY, LTD  
500 WEST MADISON STREET  
SUITE 3400  
CHICAGO, IL 60661

EXAMINER

CASCA, FRED A

ART UNIT

PAPER NUMBER

2617

MAIL DATE

DELIVERY MODE

10/18/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/733,856	<b>Applicant(s)</b> HAYEM ET AL.	
	<b>Examiner</b> Fred A. Casca	<b>Art Unit</b> 2617	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 July 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2-5, 8-10, 12, 14-21, and 23-27 is/are rejected.
- 7) ☒ Claim(s) 3, 6, 7, 11, 13 and 22 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

Art Unit: 2617

### DETAILED ACTION

1. This action is in response to applicant's Pre-Appeal Conference request filed on June 22, 2007. Claims 1-27 are still pending in the present application.

Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn. However, claims 1-27 are rejected in view of the new ground(s) of rejection.

#### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 4-5, 8-9, 12, 14, 20 and 23-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Neumann et al (U.S. Pub. No. 2002/0141441 A1), in view of Litwin et al (US 6,834,091 B2) and further in view of Sato (US 2001/0055980 A1).

Referring to claim 1, Neumann discloses a multi-mode wireless communication device (abstract, and paragraph 0004, "dual mode", telephone have been developed, in which the telephone is useable in two networks),

comprising a host baseband processor configured to operate in accordance with a first wireless communications protocol of a first wireless communications system (figures 2-8B, paragraphs 0019-0021, "first and second baseband processors", "GSM", "TDMA"), and a baseband co-processor configured to operate in accordance with a second wireless communications protocol of a second wireless communications system (figures 2-8B, paragraphs 0019-0021, 0038, 0034, 0030, 0025, "first and second baseband processors", "GSM", "TDMA").

Art Unit: 2617

Neumann does not specifically disclose the host baseband processor enables timing of synchronization between the first and second wireless communication systems.

Sato discloses timing synchronization between two communication system (paragraph 16 and 90, "system timing synchronization to support the communication system of the handover destination").

It would have been obvious to one of the ordinary skill in the art at the time of invention to modify the device of Neumann by incorporating the teachings of Sato into that of Neumann in the format claimed by applicant, for the purpose of providing a reliable communication system during a handover from one network to another.

The combination of Neumann/Sato does not specifically disclose the timing synchronization based on transmitted timing information in the format claimed by applicant.

However, timing synchronization based on transmitted timing information is a well known concept, as Litwin discloses that timing synchronization between two sources is performed based on transmitted timing information (col. 2, lines 45-62, timing synchronization is maintained between a transmitter and a receiver in accordance with timing information").

It would have been obvious to one of the ordinary skill in the art at the time of invention to modify the device of Neumann/Sato by incorporating the teachings of Litwin into that of Neumann, and allow the processor of the device of Neumann to enable synchronization based on timing information transferred from the co-processor, for the purpose of allowing the data to be transmitted at a proper rate and providing a reliable communication system.

Referring to claim 4, the combination of Neumann/Sato/Litwin discloses the multi-mode communications device of claim 1, and further discloses means for establishing

Art Unit: 2617

timing synchronization includes means for reading a current value of at least one timer maintained by baseband co-processor consistent with said second wireless communications protocol (Neumann, paragraphs 0019-0021, 0038, 0034, 0030, 0025).

Referring to claim 5, the combination of Neumann/Sato/Litwin disclose the device of claim 1, and further disclose host baseband processor further includes a higher-layer processing module and a modem for interfacing with said first wireless communication system, said higher-layer processing module being operatively coupled to said modem and to a baseband interface of said baseband co-processor (Neumann, figures 2-8B, paragraphs 0019-0021, 0038, 0034, 0030, 0025).

Referring to claim 8, the combination of Neumann/Sato/Litwin disclose the device of claim 1, and further disclose host baseband processor includes a higher-layer processor configured to effect higher-layer processing of information processed by said baseband co-processor (Neumann, figures 2-8B, paragraphs 0019-0021, 0038, 0034, 0030, 0025).

Referring to claim 9, claim 9 defines a timing synchronization method reciting features analogous to the features of the device of claim 1 (as rejected above). Thus, the combinations of Neumann/Sato/Litwin disclose all elements of claim 9 (please see the rejection of claim 1 above).

Referring to claim 12, claim 12 defines a timing synchronization method reciting features analogous to the features of the device of claim 4 (as rejected above). Thus, the combinations of Neumann/Sato/Litwin disclose all elements of claim 12 (please see the rejection of claim 4 above).

Referring to claim 14, claim 14 defines a timing synchronization method reciting features analogous to the features of the device of claim 8 (as rejected above). Thus, the

Art Unit: 2617

combinations of Neumann/Sato/Litwin disclose all elements of claim 14 (please see the rejection of claim 8 above).

Referring to claim 20, claim 20 defines a multi-mode wireless communication device reciting features analogous to the features of the device of claim 1 (as rejected above). Thus, the combinations of Neumann/Sato/Litwin disclose all elements of claims 20 (please see the rejection of claim 1 above).

Referring to claim 23, the combination of Neumann/Sato/Litwin discloses the multi-mode communications device of claim 1, and further disclose wherein said one or more of: said host baseband processor, said baseband co-processor and said additional circuitry comprises circuitry for reading a current value of at least one timer consistent with said second wireless communications protocol (Sato, paragraph 16 and 90, "system timing synchronization to support the communication system of the handover destination").

Referring to claims 24 and 27, claims 24 and 27 define a device reciting features analogous to the features of the device of claims 5 and 8 (as rejected above). Thus, the combinations of Neumann/Sato/Litwin disclose all elements of claims 24 and 27 (please see the rejection of claims 5 and 8 above).

Referring to claims 25-26, claims 25-26 define a device reciting features analogous to the features of the device of claims 6-7 (as rejected above). Thus, the combinations of Neumann/Sato/Litwin disclose all elements of claims 25-26 (please see the rejection of claims 6-7 above).

4. Claims 2, 10, 15-18 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Neumann et al (U.S. Pub. No. 2002/0141441 A1), in view of Litwin et al (US 6,834,091 B2) and further in view of Sato (US 2001/0055980 A1) and still further in view of LaRue et al (US 6,810,405 B1).

Referring to claim 2, the combinations of Neumann/Sato/Litwin disclose the device of claim 1.

The combination of Neumann/Sato/Litwin does not specifically disclose issuing a timer capture interrupt in the format claimed by applicant.

However, the concepts of initiating or activating a synchronization process in response to a timer capture interrupt is well known in the art, as LaRue discloses that a synchronization process is activated in response to a timer interrupt (col. 4, lines 1-15, col. 26, lines 27-63 and col. 27, lines 49-65, “activating a synchronization function, in response to a time interrupt”, “waits for a synchronization event to occur, such as ... a timer interrupt”).

It would have been obvious to one of the ordinary skill in the art at the time of invention to modify the device of Neumann/Sato/Litwin by incorporating the teachings of LaRue into that of the device of Neumann/Sato/Litwin, and consequently providing the host baseband processor of Neumann to have a circuitry for issuing, from the host baseband processor, a timer capture interrupt to the baseband co-processor during a predetermined timer phase of first wireless communications system, for the purpose of providing a reliable timing synchronization.

Referring to claim 10, claim 10 defines a method reciting features analogous to the features of the device of claim 2 (as rejected above). Thus, the combinations of Neumann/Sato/Litwin/LaRue disclose all elements of claims 10 (please see the rejection of claim 2 above).

Referring to claim 15, Neumann discloses a method for wireless communication (Abstract, figures 2-8B), the method comprising:

a multi-mode communication device (abstract, and paragraph 0004, “dual mode”), a first wireless communication system (figures 2-8B, paragraphs 0019-0021, “first and second baseband processors”, “GSM”, “TDMA”), wherein said multi-mode communication device communicates via a first wireless protocol with said first wireless

Art Unit: 2617

communication system, and said multi-mode communication device communicates via a second wireless protocol with a second wireless communication system (figures 2-8B abstract, and paragraph 4, 6, 9, 19-21, “first and second baseband processors”, “GSM”, “TDMA” “dual mode”).

Neumann does not specifically disclose generating a timer capture interrupt in the format claimed by applicant.

However, the concepts of initiating or generating a timer capture for the purposes of synchronization is well known in the art, as LaRue discloses that a synchronization process is activated in response to a timer interrupt (col. 4, lines 1-15, col. 26, lines 27-63 and col. 27, lines 49-65, “activating a synchronization function, in response to a time interrupt”, “waits for a synchronization event to occur, such as ... a timer interrupt”).

It would have been obvious to one of the ordinary skill in the art at the time of invention to modify the method of Neumann by incorporating the teachings of LaRue into that of the device of Neumann, and consequently providing generating within the multi-mode device of Neumann a timer capture interrupt during a predetermined timing phase of the first wireless communication system of Neumann, for the purpose of providing a reliable timing synchronization.

The combination of Neumann/LaRue does not specifically disclose timing synchronization in the format claimed by applicant.

Sato discloses timing synchronization between two communication systems (paragraph 16 and 90, “system timing synchronization to support the communication system of the handover destination”).

It would have been obvious to one of the ordinary skill in the art at the time of invention to modify the method of Neumann/LaRue by incorporating the teachings of Sato into that of Neumann/LaRue in the format claimed by applicant, for the purpose of



Art Unit: 2617

providing a reliable communication system during a handover from one network to another.

The combination of Neumann/LaRue/Sato does not specifically disclose storing a timer value, reading said timer value and determining a timing relationship between the first and second systems based upon the timer value in the format claimed by applicant.

However, timing synchronization based on transmitted timing information is a well known concept, as Litwin discloses that timing synchronization between two sources is performed based on transmitted timing information (col. 2, lines 45-62, timing synchronization is maintained between a transmitter and a receiver in accordance with timing information”).

It would have been obvious to one of the ordinary skill in the art at the time of invention to modify the device of Neumann/LaRue/Sato by incorporating the teachings of Litwin into that of Neumann/LaRue/Sato in the format claimed by applicant, for the purpose of allowing the data to be transmitted at a proper rate and providing a reliable communication system.

Referring to claim 16, the combinations of Neumann/LaRue/Sato/Litwin disclose the method of claim 15.

The combo is silent about storing an additional timer value of at least one other timer pertinent to operation of said second wireless communication system in response to said timer capture interrupt; reading said additional timer value, said timing relationship being based at least in part upon said additional timer value as claimed by applicant.

It would have been an obvious design choice to modify the method of Neumann/LaRue/Sato/Litwin by storing an additional timer value of at least one other timer and reading said additional time value, as claimed by applicant, since the applicant

Art Unit: 2617

has not disclosed that storing an additional timer value solves any stated problem or is for any particular purpose.

Referring to claim 17, the combinations of Neumann/LaRue/Sato/Litwin disclose the method of claim 15.

The combo is silent about one or more timers being incremented pursuant to operation of the first wireless communication system, determining a timing relationship including comparing at least one value of the one or more timers with the timer value. .

It would have been an obvious design choice to modify the method of Neumann/LaRue/Sato/Litwin by having one or more timers being incremented pursuant to operation of the first wireless communication system, determining a timing relationship including comparing at least one value of the one or more timers with the timer value, as claimed by applicant, since the applicant has not disclosed that storing an additional timer value solves any stated problem or is for any particular purpose.

Referring to claim 18, the combinations of Neumann/LaRue/Sato/Litwin disclose the method of claim 15, and further disclose said first wireless communications system operates in accordance with a first wireless communications protocol and said second wireless communications system operates in accordance with a second wireless communications protocol different from said first wireless communications protocol (Neumann, abstract, and paragraphs 2-9, TDMA, GSM).

Referring to claim 21, claims 21 defines a device reciting features analogous to the features of the apparatus of claims 2, and (as rejected above). Thus, the combinations of Neumann/Sato/Litwin/LaRue disclose all elements of claim 21 (please see the rejection of claim 2 above).

5. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Neumann et al (U.S. Pub. No. 2002/0141441 A1), in view of Litwin et al (Us 6,834,091 B2) and further in view of Sato (US 2001/0055980 A1) and further in view of LaRue et al (US 6,810,405 B1) and still further in view of well known prior art (MPEP 2144.03).

Art Unit: 2617

Referring to claim 19, the combinations of Neumann/LaRue/Sato/Litwin disclose the method of claim 18, and further disclose said first wireless communications protocol comprises GSM (Neumann, paragraphs 19-21).

The combination of combinations of Neumann/LaRue/Sato/Litwin does not specifically the second wireless communications protocol comprises WCDMA.

The examiner takes official notice of the fact that a WCDMA network well known in the art.

It would have been obvious to one of the ordinary skill in the art at the time of the invention to incorporate the teachings of prior art by providing a WCDMA network to the method of Neumann/Kransmo/Schutte, for the purpose of serving a wider network of clients.

#### **Allowable Subject Matter**

6. Claims 3, 6, 7, 11, 13 and 22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Response to Arguments***

7. Applicant's arguments with respect to claims 1-27 have been considered but are moot in view of the new ground(s) of rejection.

#### **Conclusion**

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fred A. Casca whose telephone number is (571) 272-7918. The examiner can normally be reached on Monday through Friday from 9 to 5.

Art Unit: 2617

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid, can be reached at (571) 272-7922. The fax number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



LESTER G. KINCAID  
SUPERVISORY PRIMARY EXAMINER